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EXAMINER	
HICKS, CHARLES V	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,319	INOUE, MIKIO	
	Examiner	Art Unit	
	CHARLES HICKS	4175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,6-8 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4, 6-8, 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/21/2006;07/09/2007;09/06/2007;11/19/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-3, 5, and 9-11 are cancelled.

Claims 4, 6-8, and 12 are being examined.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rafii et al. (6,614,422) in view of Kloba (US 7,263, 547).

In reference to claim 4, Rafii teaches a mobile communication terminal (Rafii Fig. 1A, 80), comprising:

image projection means for projecting an operation-plane image that displays virtually an operation-plane of an operation device operated by users (Rafii Fig. 1A, 145; column 4 lines 27-33);

operation detection means for detecting operation on the operation-plane image projected by the image projection means (Rafii Fig. 1A, 20; column 10 lines 27-34);

data processing means for performing a predetermined data process based on the detection result of operation detected by the operation detection means (Fig. 3; column 7 lines 16-18);

wherein the image projection means projects an operation-plane image corresponding to recognition function designated by designation information received from the application execution management means, among a plurality of kinds of mutually different operation-plane images (Rafii column 4 lines 27-33; the invention can project a grid or image);

and the operation detection means has a plurality of kinds of mutually different recognition functions to recognize operation content by at least one of position direction and movement of an operation object on the plurality of kinds of operation-plane images (Rafii column 12 lines 33-47),

and detects operation on the operation-plane image by using the recognition function designated by designation information received from the application execution management means (Rafii column 10 lines 27-34).

Rafii however fails to teach application execution management means for managing application program execution environment of an application program selected from a plurality of application programs that is downloaded via a mobile communication network.

Kloba teaches application execution management means for managing application program execution environment of an application program selected

from a plurality of application programs that is downloaded via a mobile communication network (Kloba column 4 lines 37-41; column 7 lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication terminal of Rafii with the application download of Kloba.

The motivation being to enable the user to run multiple applications on a mobile device.

In reference to claim 6, Rafii teaches a mobile communication terminal (Rafii Fig. 1A, 80), comprising:

image projection means for projecting an operation-plane image that displays virtually an operation-plane of an operation device operated by users (Rafii Fig. 1A, 145; column 4 lines 27-33);

operation detection means for detecting operation on the operation-plane image projected by the image projection means (Rafii Fig. 1A, 20; column 10 lines 27-34);

data processing means for performing a predetermined data process based on the detection result of operation detected by the operation detection means (Fig. 3; column 7 lines 16-18);

wherein the image projection means projects an operation-plane image corresponding to recognition function designated by designation information

received from the application execution management means, among a plurality of kinds of mutually different operation-plane images (Rafii column 4 lines 27-33;

the invention can project a grid or image); and the operation detection means has a plurality of kinds of mutually different recognition functions to recognize operation content by at least one of position, direction and movement of an operation object on the plurality of kinds of operation-plane images (Rafii column 12 lines 33-47),

and detects operation on the operation-plane image by using the recognition function corresponding to the operation-plane image designated by designation information received from the application execution management means (Rafii column 10 lines 27-34).

Rafii however fails to teach application execution management means for managing execution environment of an application program selected from a plurality of application programs that is downloaded via a mobile communication network.

Kloba teaches application execution management means for managing execution environment of an application program selected from a plurality of application programs that is downloaded via a mobile communication network (Kloba column 4 lines 37-41; column 7 lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication terminal of Rafii with the application download of Kloba.

The motivation being to enable the user to download applications for use on the mobile device.

In reference to claim 7, Rafii teaches a mobile communication terminal (Rafii Fig. 1A, 80),

comprising: image projection means for projecting an operation-plane image that displays virtually an operation-plane of an operation device operated by users (Rafii Fig. 1A, 145; column 4 lines 27-33);

operation detection means for detecting operation on the operation-plane image projected by the image projection means (Rafii Fig. 1A, 20; column 10 lines 27-34);

data processing means for performing a predetermined data process based on the detection result of operation detected by the operation detection means (Fig. 3; column 7 lines 16-18);

memory means for memorizing a plurality of image data corresponding to each of a plurality of kinds of operation-plane images (Rafii column 12 lines 48-53);

and instruction generation means for generating an operation-plane image selection instruction in accordance with content of the selected application program (Fig. 3; column 7 lines 16-18);

wherein the image projection means selects an image data from the plurality of image data memorized in the memory based on the operation-plane

image selection instruction generated by the instruction generation means, and projects the operation-plane image of the selected image data (Rafii column 4 lines 27-33; the invention can project a grid or image);

and the application execution management means performs a data process corresponding to operation detected by the operation detection means in accordance with the content of the application program during execution of the selected application program (Rafii column 10 lines 27-34) .

Rafii however fails to teach application execution management means for executing an application program selected from a plurality of kinds of application programs that is downloaded via a mobile communication network.

Kloba teaches application execution management means for executing an application program selected from a plurality of kinds of application programs that is downloaded via a mobile communication network (Kloba column 4 lines 37-41; column 7 lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mobile communication terminal of Rafii with the application download of Kloba.

The motivation being to enable the user to run multiple applications on a mobile device.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rafii et al. (6,614,422) in view of Kloba (US 7,263, 547) and Tuli (US 6,941,382).

In reference to claim 8, Rafii teaches a le communication terminal (Rafii Fig. 1A, 80),

comprising: image projection means for protecting an operation-plane image that displays virtually an operation-plane of an operation device operated by users (Rafii Fig. 1A, 145; column 4 lines 27-33);

operation detection means for detecting operation on the operation-plane image projected by the image projection means (Rafii Fig. 1A, 20; column 10 lines 27-34);

and performs a data process corresponding to operation detected by the operation detection means in accordance with the content of the application program (Rafii column 10 lines 27-34).

Rafii however fails to teach application execution management means for executing an application program selected from a plurality of application programs that is downloaded via a mobile communication network,

Kloba teaches application execution management means for executing an application program selected from a plurality of application programs that is downloaded via a mobile communication network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication terminal of Rafii with the application download of Kloba.

The motivation being to enable the user to run multiple applications on a mobile device.

Rafii as modified by Kloba however fails to teach a data readout means for reading out image data of an operation-plane image included in the content of the application program; wherein the image projection means projects an operation plane-image based on the image data read out by the data readout means when executing the selected application program.

Tuli teaches a data readout means for reading out image data of an operation-plane image included in the content of the application program; wherein the image projection means projects an operation plane-image based on the image data read out by the data readout means when executing the selected application program (Tuli column 6 lines 17-19; user views the data as it is being input).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication device of Rafii as modified by Kloba, with the user viewing the data as it is being input, of Tuli.

The motivation being a mobile device that provides the user with immediate feedback of inputs selected by the user.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rafii et al. (6,614,422) as modified by Kloba (US 7,263, 547) as applied to claims 4, 6, or 7 above, and further in view of Lieberman (US 2002/0075240).

Claim 12 is rejected as being dependent on claims 4, 6, or 7 as discussed above and further, Raffi modified by Kloba fails to teach a mobile communication terminal according to claim 4, 6, 7 or 8, wherein the mobile communication terminal is configured by using a light source, a spatial light modulation unit for modulating light output from the light source, and an optical system for projection imaging that projects by imaging a light image output from the spatial light modulation unit on an external projection screen, the mobile communication terminal comprises an optical system for diffused illumination for homogenously illuminating by diffusing light output from the light source to an external illumination plane, and the light source and the spatial light modulation unit are both shared to generate a light image subject to projection and generate a light subject to diffused illumination.

Lieberman teaches wherein the mobile communication terminal is configured by using a light source, a spatial light modulation unit for modulating light output from the light source, and an optical system for projection imaging that projects by imaging a light image output from the spatial light modulation unit

(Lieberman Fig. 28; page 10 paragraph 184) on an external projection screen (Lieberman Fig. 29; page 10 paragraph 186), the mobile communication terminal comprises an optical system for diffused illumination (Lieberman page 10 paragraph 184) for homogenously illuminating by diffusing light output from the light source to an external illumination plane (Lieberman Fig. 28), and the light source and the spatial light modulation unit are both shared to generate a light image subject to projection and generate a light subject to diffused illumination (Lieberman page 6 paragraph 135; light source is a single laser source).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication terminal of Rafii as modified by Kloba, with the spatial light modulation and projection of Lieberman..

The motivation being to enable the user to project a mobile device onto a larger, more readable screen.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rafii et al. (6,614,422) as modified by Kloba (US 7,263, 547) and Tuli (US 6,941,382) as applied to claims 8 above, and further in view of Lieberman (US 2002/0075240).

Claim 12 is rejected as being dependent on claim 8 as discussed above and further, Raffi modified by Kloba and Tuli fails to teach a mobile communication terminal according to claim 8, wherein the mobile communication terminal is configured by using a light source, a spatial light modulation unit for

modulating light output from the light source, and an optical system for projection imaging that projects by imaging a light image output from the spatial light modulation unit on an external projection screen, the mobile communication terminal comprises an optical system for diffused illumination for homogenously illuminating by diffusing light output from the light source to an external illumination plane, and the light source and the spatial light modulation unit are both shared to generate a light image subject to projection and generate a light subject to diffused illumination.

Lieberman teaches wherein the mobile communication terminal is configured by using a light source, a spatial light modulation unit for modulating light output from the light source, and an optical system for projection imaging that projects by imaging a light image output from the spatial light modulation unit (Lieberman Fig. 28; page 10 paragraph 184) on an external projection screen (Lieberman Fig. 29; page 10 paragraph 186), the mobile communication terminal comprises an optical system for diffused illumination (Lieberman page 10 paragraph 184) for homogenously illuminating by diffusing light output from the light source to an external illumination plane (Lieberman Fig. 28), and the light source and the spatial light modulation unit are both shared to generate a light image subject to projection and generate a light subject to diffused illumination (Lieberman page 6 paragraph 135; light source is a single laser source).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the mobile communication terminal of Rafii as

modified by Kloba and Tuli, with the spatial light modulation and projection of Lieberman.

The motivation being to enable the user to project a mobile device onto a larger, more readable screen.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES HICKS whose telephone number is 571-270-7535. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz, can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CH

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